

The Upper Silver Creek Watershed Process Park City, Utah

A One Year EPA Review



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October, 2000

I. INTRODUCTION

This document presents a brief EPA overview and evaluation of the innovative actions taken, benefits received, and work remaining after one year of an EPA-led, structured watershed process in the Upper Silver Creek Watershed, Park City, UT. } *MARK*

II. BACKGROUND

The EPA Superfund program has been involved in Park City since the early 1980's and until this year has met with very limited success. Our involvement in Park City was characterized by highly critical media coverage, local opposition, and even congressional intervention. The prevailing opinion of Park City government, as well as many influential citizens, was that EPA and Superfund were inefficient and could not be trusted. Our relationship with the primary Potentially Responsible Party (PRP), United Park City Mines, was adversarial and counterproductive. It was also strongly felt by most people in the area that Park City's mining legacy left no appreciable health threats, and that any threats present were better handled at the local level. Similar feelings were held toward the Utah Department of Environmental Quality (UDEQ). These attitudes made EPA's Superfund mission nearly impossible to perform and resulted in no EPA-led cleanups being conducted in the area through 1998. *History Imp Super*

As of 1998, there were six separate mining-related sites in the Park City area which were listed on the CERCLIS database. Only one of those was archived - and it with a pending "reopener." This meant that after nearly twenty years and hundreds of thousands of dollars of involvement in Park City, there were still at least five active sites requiring cleanup or further investigation. These ranged from Richardson Flats, which was last proposed for the National Priorities List in 1992, to Empire Canyon, for which only a preliminary assessment was completed. Additionally, UDEQ and EPA had recently performed *Innovative Assessments* (IA's - a preliminary investigation to determine if a site may warrant inclusion on CERCLIS before actually placing it in the database) on four other sites. The recommendations of these IA's were that these sites also be added to CERCLIS. In all, some ten sites in the general area were deemed worthy of some further EPA involvement. }

Most of these sites share many common characteristics: same area, same stakeholders, and the same contaminants, to name a few. More importantly, 9 of the 10 sites share the same watershed. The area is drained by Silver Creek, which in turn empties into the Weber River. Silver Creek is currently listed on the State of Utah's 303d impaired water body list, with mining-related zinc and cadmium the primary contaminants. Park City also gets a great deal of its water supply from local wells - and even mining tunnels - in the watershed. Park City is facing heavy growth and is also the site of many events of the 2002 Winter Olympics. *PRPs*

III. START OF THE WATERSHED PROCESS

Sec. In 1997, the idea of addressing the Park City area as more of a *group* of sites, as opposed to a collection of *individual* sites, began to surface in EPA. While Superfund site assessment work on individual sites continued, it was generally being recognized within EPA that the Superfund process was not going to be an acceptable approach. Any environmental concerns in Park City were likely the result of several sites, requiring a watershed or area-based investigation. Because of this, our Site Assessment Program effectively put a hold on adding any new sites into CERCLIS. Additional area wide information was sought by the Superfund Site Assessment and Remedial Programs through the Utah Abandoned Mine Land AVIRIS project - a project funded by EPA aimed at characterizing large mining districts through the use of airborne spectrometry.

In early 1998, the Superfund Remedial Program began laying the ground work for pursuing a community-based, watershed effort in the Park City area. The premise was to use watershed-based data and solutions to make site-specific cleanup decisions, keeping as much responsibility with the community as possible and appropriate. The timing for a new initiative was right in many ways:

- Development was pushing into contaminated areas that were previously unpopulated, creating both increased exposure to contaminants and the chance for redevelopment of contaminated sites.
- The impending Olympics made a cooperative process more attractive.
- United Park City Mines was evolving into a land development company, realizing that environmental considerations on their lands must be addressed to further development goals.
- Site assessment efforts, coupled with AVIRIS, had finally yielded a complete picture of the mining-related sites which exist in the area - the inventory was finally complete.
- The demographics and local government of the area had changed significantly since the 1980s.
- Water quality issues in Silver Creek were still yet to be addressed.

Initial efforts focused on face-to-face contact with a diverse and varied group of local stakeholders to offer the idea of a community-based, cooperative watershed effort being used to facilitate Superfund interests. Part of this effort was to gain acceptance of EPA as a cooperating partner as opposed to an onerous Federal bureaucracy. It was also important to begin reestablishing trust.

Initial response was very positive, though most of the skepticism of the 1980s was still very prominent. It appeared that the watershed process was workable. The Superfund Remedial and Site Assessment Programs, as well as the UDEQ, committed to go forward with the process.

Secondary work involved engaging the more principal stakeholders: Park City government and United Park City Mines. Without their cooperation and commitment, the process would fail.

MINIMUM -
LESSON IN MATH
EPA proposed the idea of a jointly funded (EPA, Park City, and UPCM), neutral facilitator to manage the process. The choice of facilitator would be left to Park City. After significant discussion, both Park City and United Park City Mines committed to the project and a facilitator was hired.

Final startup work involved the facilitator and EPA identifying and contacting potential stakeholders. The first stakeholder meeting was held in November 1999, with the first task being operating agreements and establishment of goals. Key stakeholders include:

- EPA, led by the Superfund program
- UDEQ - Superfund
- UDEQ - Water Quality
- Park City Municipal Corporation (both hired and elected officials)
- Summit County Health Department
- United Park City Mines
- Citizens Allied for Responsible Growth
- Prospector Square Homeowners Association
- U.S. Fish and Wildlife Service
- Deer Valley and Park City Mountain Resorts

Other stakeholders are also involved. The group was named the Upper Silver Creek Watershed Stakeholder Group (USCWSG). To date, six bi-monthly meetings have been held and numerous other activities related to community outreach and stakeholder cooperation have taken place.

IV. INNOVATIVE STRATEGIES

Several innovative strategies have been employed in this process. Some key ones are listed below by general subject area.

Process

- Use of a facilitator, while not new, is not common practice in Superfund situations. Joint funding of the facilitator by major stakeholders and allowing Park City to select the facilitator was an innovative approach.
- EPA, or the State under cooperative agreement, normally performs all Superfund site assessment activities - EPA would generally not allow a PRP to tell us whether a site needs further federal involvement. However, in this situation, EPA has allowed Park City to perform a site inspection on the Marsac Mill site (where they were a PRP) and has encouraged UPCM to perform extensive watershed-based, site assessment related work. EPA retained approval authority. This site inspection is complete and was approved by EPA.
- EPA Superfund normally makes site assessment decisions with limited data and little

outside involvement. In this situation, EPA is slowing the process down to accommodate more stakeholder and public involvement earlier in the Superfund process in order to make more informed decisions.

- Site assessment investigation is focused on three media (ground water, surface water, and soils) across the watershed, rather than on individual sites. Each media will be investigated separately, and this information will be coupled with limited site-specific work to make decisions regarding the individual sites. This type of watershed approach is rarely applied to multiple sites in the Superfund program.
- EPA has entered into a small cooperative agreement with Park City to provide them additional funds for their participation in the watershed process and their assistance with our site assessment and remedial work. Park City has extensive local knowledge critical to performing the Superfund mission.
- Natural resource trustees, primarily U.S. Fish and Wildlife, have been invited into the Superfund process earlier in the hopes of encouraging good technical information sharing and limiting/resolving any natural resource damage issues amicably.
- Reduced and cooperative oversight of PRP work is being employed where appropriate.
- EPA has publicly promoted and supported reuse and redevelopment of contaminated property in the area in accordance with local desires.
- EPA has deferred to the stakeholders group on the issue of timing. As long as public health is not compromised, we will attempt to work within a schedule worked out by the group. (G. V. ...)

Community Involvement & Media Relations

- The group has established a web site relating to the process. The site contains general information, as well as documents for review, contacts, and upcoming events. The web site is fully funded by UPCM. Administrative records, where required, will be available on the site to supplement hard copy repositories.
- The group held a live broadcast public meeting over the local public radio station. Listeners could call in and ask direct questions of EPA, UDEQ, Park City, and UPCM. About 100 people attended the meeting in person with countless more listening at home. Other similar meetings may follow.
- EPA has done significant outreach, speaking in person to the City Council, County Commission, Homeowner Associations, Rotary Club, and numerous other organizations. Talks focused on improving image rather than the substance of impending work.
- EPA has embraced a very proactive media approach, developing limited relationships with reporters and editors and sharing information freely and informally. The EPA project manager gives a live radio interview approximately monthly.
- EPA and UDEQ jointly briefed Utah Congressional staffs at the outset of the process and again during a time of potential visibility. EPA generally takes a more reactive approach to dealing with congressional staffs, responding to inquiries and pressure rather than being proactive and delivering a message early.
- A community involvement plan for the entire watershed was developed based on

community interviews. The CIP has the support of the stakeholder group and is being implemented.

Funding & Enforcement

- Because use of Superfund authority is being minimized, funds generally available under Superfund are absent. Therefore, EPA made clear that the success of the process hinged on cooperative funding. The group also may pursue grants from EPA or other sources in the future for work that may be used to help make Superfund site assessment or cleanup decisions.
- EPA has not relinquished any authority, but we have publicly stated that we will limit use of our authority if other appropriate means are available.
- At Richardson Flats, a proposed NPL site within the watershed, EPA has agreed to several non-standard arrangements with UPCM for conducting the RI/FS. These include EPA agreeing in writing to specific document review times and streamlining the RI/FS where appropriate.

V. BENEFITS/ACHIEVEMENTS TO DATE

Relationships

Trust and acceptance among all parties is greatly enhanced. Several examples are given below:

- In the past, EPA required several months and legal actions to access UPCM property. Today, EPA has nearly unlimited, immediate access.
- EPA, UDEQ, and UPCM talk several times weekly via phone - information sharing has become second nature.
- Both Park City and UPCM attended a Superfund Redevelopment Conference as speakers, advocating for cooperation and complimenting the "new" stance of the Agency.
- At the onset of the process, stakeholders were very skeptical of any EPA-produced written material or proposed speaking engagement. The level of trust along these lines has increased substantially.

Public Perception/Acceptance of EPA

After such extreme negative public reaction in the 1980s, public reaction to this current effort has been characterized by "passive acceptance." Very few, if any, complaints have been received. Most inquiries have been complimentary. No congressional complaints; no complaint "letters to the editor"; no complaint letters to EPA; no complaints via the web site. Community interviews have shown the general public supports EPA's presence in such a process and encourages it to continue. Acceptance in city government is slower to improve.

Over 15 articles have run in the local papers; over two dozen radio interviews have been conducted with stakeholders; 2 articles/stories were picked up by the Associated Press; and one story warranted Salt Lake television coverage. Media coverage has been nearly completely factual and positive toward EPA. From an EPA perspective, articles are far more unbiased than in the 80s. An editorial in the local paper strongly suggested EPA should be supported on this effort. Media attention was intense at first, but has died down considerably due to lack of interest. Lack of interest indicates lack of controversy. The media is also providing free public service advertisements of future meetings or events.

— UPDATE na Jers

- UPCM, with input from EPA and other stakeholders, prepared a sampling plan for conducting a watershed wide, seasonal sampling event of Silver Creek. A non-site specific sampling event such as this one would have been difficult to justify and finance using strictly Superfund authority. This was the first watershed based sampling in the area that looked at cumulative and individual impacts to Silver Creek. We will soon know which sites within the watershed contribute the bulk of the metal loading. Samples were collected in over 25 locations including many sediment samples. Samples were collected during high flow (spring) and low flow (fall) conditions. Data from this event is being made public right now and will be interpreted in the future. A potentially controversial sampling event was conducted cooperatively and without incident. Costs for this sampling event, funded entirely by UPCM are estimated at approximately \$150,000. The costs borne by EPA are funding limited State oversight and payroll costs.
- UDEQ has moved up its Total Maximum Daily Load effort for Silver Creek to able to coordinate with the stakeholder/watershed process. The sampling effort will begin in Spring 2001 and will build heavily off the watershed sampling of 2000. Cleanup decisions will be made in conjunction with the USCWSG. UDEQ will fund this work.
- USGS conducted a sediment study of the Weber River watershed, and through coordination, they were able to collect several high-quality samples in Silver Creek. These will aid in interpreting water quality concerns on Silver Creek. USGS funded this work entirely.
- After over ten years of inactivity, EPA has entered into an Administrative Order on Consent with UPCM to conduct an Remedial Investigation/Feasibility Study at Richardson Flats. It was determined the Superfund process was most suitable for addressing issues at this site. Information from the watershed work will be used to help make sound decisions about this site and vice versa. This work (including EPA oversight and a portion of past costs) will be entirely funded by UPCM or other responsible parties for the site.
- In cooperation with EPA and UDEQ, UPCM is also pursuing significant voluntary assessment work on several areas scheduled for development within the watershed. Again, this information will aid in future EPA site assessment efforts and will be funded entirely by UPCM. Costs will likely run into the hundreds of thousands and will be borne

primarily by UPCM. EPA and UDEQ are contributing resources where appropriate.

- Park City funded and conducted a very detailed Site Inspection of the Marsac Mill Site, which was approved by EPA and UDEQ. This work provided sufficient information for making a cleanup decision on the site early in the Superfund pipeline and accommodating a major redevelopment project. EPA would not have been able to move this quickly. This investigation work was funded entirely by Park City, with an estimated cost of \$350,000.
- The stakeholders group are currently pursuing methods and resources for conducting future soils and ground water investigation across the watershed.

Cleanup/Risk Management

While little actual cleanup has occurred in the first formal year, a few significant milestones have been reached.

- Park City is voluntarily cleaning up the Marsac Mill site under the State Voluntary Cleanup Program. Cleanup began in spring 2000 and will be complete fall 2000. The historic mill site will be the site of an intermodal transportation center. The redevelopment plan was integrated with the cleanup plan. Cleanup involves significant off-site disposal of highly contaminated soils and on-site capping/covering of lower level soil contamination. This work should lead to archiving the site from CERCLIS in the future. Costs for the environmental portion of this work are estimated at \$500,000. This cleanup was achieved with no litigation and no cost recovery action. The relationships and trust built through the watershed process were critical to envisioning this project and making it work.
- United Park City Mines is voluntarily cleaning up the former Ontario Mill Site, rebuilding the Silver Creek stream channel there, covering the area with clean fill, and using the area as a runaway truck ramp for a dangerous highway. Though EPA was unable to give formal advice or approval on this project because the work was outside of any regulatory process, we were able to offer technical advice and generally support the cleanup. EPA considers this a beneficial, safe use for this site. The community and city support the project. Work is entirely funded by UPCM and its partners.
- UPCM plans to remediate the Richardson Flats site and potentially redevelop the area into a County Park and 27 hole golf course. Preliminary plans are in the works and will be integrated with investigation and cleanup. This work, including EPA oversight, will be entirely funded by UPCM and its partners.
- Park City Municipal Corporation and Summit County applied for and received two Clean Water Act Section 104 (b) (3) grants from EPA for preparing Storm Water Management Plans. Park City called this the "Clean Creeks Initiative." These plans will aid in reducing non-point sources to both Silver Creek and East Canyon Creek, both on the 303(d) list. Both Park City and Summit County are providing matching funds.
- Through the watershed process, a significant problem with Park City's water supply was discovered. Elevated levels of lead, and possibly other metals, were making their way into consumers' homes during episodic sediment transport/disturbance events. This is a problem that had gone undetected through normal Safe Drinking Water Act monitoring.

⑤ IC's/only under

Park City is now working cooperatively with EPA and UDEQ to fix the problem and will likely fund the majority of the work.

- UPCM is pursuing two residential-level cleanups on heavy metal contaminated land in the Empire Canyon area. Rather than conducting extensive investigation, UPCM is planning on taking a very conservative approach, erring on the side of caution, and cleaning up to a level very suitable to EPA and UDEQ. UPCM and its partners will fund this work entirely. □/
- The local Board of Realtors agreed to change their property disclosure statements to include broad discussion of potentially contaminated soils in the Park City area. This is an important institutional control which will aid public awareness. □
- EPA has worked constructively with the USCWSG and especially the Summit County Health Department to develop a guidance/information packet for residents who have environmental health concerns. The County Health Department is providing free testing for anyone who cannot afford a private physician. Local physicians will be briefed as well. □

VI. WORK REMAINING

Watershed Investigations

1. Surface Water. This is the only media for which we have collected significant watershed-wide data. Our 2000 watershed sampling event, coupled with UDEQ's TMDL analysis in 2001, will allow us to begin making cleanup decisions as early as next year. Further site specific sampling is expected to be required as the watershed-based sampling begins to focus attention on certain areas and cleanups become likely.

2. Soils. This is the most difficult, and political, of the three media we are investigating. This contamination impacts many residential yards across Park City, and was the source of most of the controversy in the 1980s. The stakeholder group has started on this path very slowly and carefully. No data collection has occurred yet. Three working groups have been established to discuss the various soils issues and their work is just beginning. Future work will include: (1) evaluating the effectiveness of the Park City Soils Ordinance, adopted by Park City in response to EPA's 1980s presence; (2) delineating all areas of the watershed which are impacted, (3) deciding on a course of action for addressing contaminated areas.

3. Ground water. Ground water is certainly impacted across the watershed to varying degrees. However, this is considered a lower priority, as awareness of this situation is high and human and environmental exposure via this route is small compared to the other media. However, significant issues exist and will have to be addressed. Future work will first involve collection and analysis of the extensive existing ground water data regarding different areas in the watershed. EPA envisions using this data and analysis to develop a watershed-based, multi-media model to aid in decision making regarding this media.

4. Site Specific. Extensive site specific data has been collected, but more will be required as watershed investigations begin to focus future efforts and cleanups become necessary.

Cleanup/Risk Management Actions

Extensive potential cleanup remains. Only limited cleanup has occurred to date. No sites have been archived from CERCLIS, and EPA closure on any sites may take several years. However, for an area and project of this size and scope, a timetable of several years is not unreasonable.

Extensive cleanup and management, both for point sources and non-point sources, will likely be required to bring Silver Creek into compliance with Water Quality Standards. The greatest challenge will be finding the authority and resources to address non-point sources. Likewise, extensive negotiation and decision making remains regarding how we will address the large portion of Park City which may be impacted by contaminated soils. Little future cleanup work is anticipated regarding ground water, due to technical impracticability and lack of risk.

VII. SUMMARY

The first year of this process has proven highly effective. Compared with past failures to achieve results in the Park City area using strict Superfund authority, these current results are very encouraging. Significant work remains, and several more years of intense work may be required. The most controversial issues are still ahead and it remains to be seen if this process will continue to be effective.